

The Newsletter of the Home Wing of Van's Air Force; Builders and Fliers of Van's RV Series Aircraft

NOVEMBER

The November meeting was held at Frank Justice and Bill Benedict's hangars out at Twin Oaks Airpark. Despite the biting cold weather, the hangars were kept at a balmy 40-45F thanks to a few industrial strength propane heaters. Highlights of the evening included a hands-on demo on breaking into a locked vehicle given by Brent Ohlgren after one of our fearless members was in such a rush to join in on the festivities that he locked his keys in his truck. Complete time for the demo was under 5 minutes, and that included making the necessary tool... There were two completed RV's to look at, Frank Justice's recently completed factory stock RV-6A, and Bill Benedict's RV-4 which sported a number of recent speed mods including new wheel fairings, engine baffling, fuel injection (if you can't beat 'em, throw more money at the problem!), etc. The hot dogs were great, and we had a lot of fun. Thanks guys!!!!

MEETING NOTICE - Frank Justice, Meeting Coordinator
(503) 590-3991 Frank_K_Justice@ccm.ssd.intel.com

Place: Rob Hickman's house
12330 Sheldrake; Beaverton
Date: (2nd Thurs. of the month)
Time: 7:00 pm

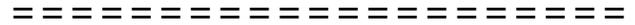
The next meeting of the Portland Area RV Builders' Group will be held at 7:00PM Thursday, December 11, at Rob Hickman's house in the southwest corner of Beaverton. Rob is building an RV-4 and is working on his wiring, panel, and engine (IO-360 with constant-speed prop) installations. Rob's special project is a complete engine monitoring system using a single flat-panel display with bit-mapped graphics. He hopes to turn this into a product for homebuilts.

< MAP didn't scan well >

To get there from the north and east, go south on either Murray Blvd or 217 and turn right on Scholl's Ferry road, 210. The road changes to Old Scholl's Ferry Road before you get to Murray Hill and Scholl's Ferry goes off to the left at a traffic light. Go straight to be on Old Scholl's Ferry. Just after you go over the top of a hill after the road changes from four lanes to two, turn left at the second Windsor Park sign (158th Ave.) where the houses and the road are finished. There is an earlier Windsor Park entrance where the houses are not finished and the road will probably be roped off.

If you are coming from the Hillsboro take River Road to 210 (Scholl's Ferry Rd) and go straight at that intersection. Stay on Scholl's Ferry past Beef Bend Road and turn right at the Windsor Park sign on the right as you near the top of the next hill in a wooded area with new houses.

Go down 158th and turn left on Harlequin, then left on Sheldrake, and go to the second house on the right, number 12330. The phone number is 524-3190 in case you get lost.



EVENTS CALENDAR

EAA Chapter 105 Monthly Meeting

At this month's meeting, we will have the **Holiday Pot-luck Dinner**. Thursday, December 18th (third Thursday of every month), 7:00 pm at the EAA 105 Hangar/Clubhouse, Twin Oaks Airpark.

EAA Chapter 105 "Breakfast at the Aileron Cafe"

Saturday, January 3rd (first Saturday of every month) at Twin Oaks Airpark, 8:00 am.



SUBSCRIPTIONS DUE

Look at the date under your address on the cover. THAT IS THE DATE YOUR \$10 IS DUE. Use the form at the back of this newsletter to subscribe or renew. If you are paid up but the date doesn't reflect this, please give the Editors a call so they can correct it.

FROM THE "BIG MESS"

by Kathy Hall, Co-Editor

Hi all...did you all get your Christmas lists filled out and posted on the refrigerator? We sure did! Jerald probably won't be getting anything, since everything on it is at least several hundred dollars...spoiled, spoiled, spoiled!

We went to the Air Fair at the convention center this year. I was really impressed. It was a lot bigger and better than I expected. Several of the tool companies were there, (heck that's why we went to Oshkosh... Maybe we didn't need to make the trip!), and many other product vendors as well. Many local clubs and flight service companies were represented also. And the stuff for the kids was absolutely wonderful -there were all sorts of simulators, activities, and hands-on demo's. Definitely put it on your calendars for next year if you haven't been. And it was FREE! You just can't beat that!

If you haven't heard yet, the latest word is that John Denver ran out of gas...rule #1!

THE TOOLAHOLIC

by Randall Henderson

Bandsaw

Van's manual says a bandsaw is "optional". Forget that -- just go get one and be done with it. Yes, you can do what you need to with a hacksaw or die grinder and cutting wheel, or (ooh luxury!) a hand-held jigsaw. But why make it hard on yourself? Trust me, you'll use it plenty.

I suppose that with the new improved kits with everything prepunched, it may seem that there is less of a need for one. But even the new and QB builders will eventually get to that "90% done, 50% to go" point, which, if you've been there, you know involves plenty of custom fabrication of parts. I was recently talking to an RV-8 builder about bandsaws and he said he has one and has found it to be quite useful on his project. So there you have it.

So you want a bandsaw, but which kind? There are floor models, bench-top models, large and small, single and variable speed. You can really go to town on this if you want to. But a small, single-speed bench-top model will take care of just about anything you need to do for you' RV. And you can always buy or make a stand for it you need to save bench space.

I started out with a Sears bench-top variable speed, but that turned out to be too wimpy and I wouldn't recommend it. The blade was pretty narrow (3/16"?) and got dull pretty fast, the control box failed soon after I got it, and the warranty service was less than satisfactory. I ended up with a small Delta bench-top, which has served me well. It's no good for steel since it's single-speed (don't even try it — you'll wear out the blade on one part) but works great for aluminum.

Why not get a variable speed so you can slow it down and cut steel? The primary reason is cost. Generally you're going to have to pay quite a bit more for a *good quality* variable speed model, and there just isn't that much steel to cut, so unless you just have to have that capability, its' not really worth it.

Where to get one? Pretty much anywhere. But I was in Costco in Beaverton recently and saw that they are selling Delta 10" tabletop models at \$119. This is the very same one that I have, and looks to be a pretty good deal.

HVLP (HIGH VELOCITY. LOW PERFORMANCE?)*by Scott McDaniels*

It may seem so as the guy who gets frustrated with the HVLP spray rig he is trying to learn about goes sailing out the shop door. It really stands for High Volume Low Pressure. And since we have a system in the group now, I thought I would pass along a few things that I have learned about them to help you in your learning process. That's really what it is, because even if you have done other spray jobs with a standard high pressure spray gun you have to relearn a few things. Basic painting techniques are really pretty much the same, it's the operation of the equipment and sometimes the mixing of the paint that differs.

First off a disclaimer - I am far from being an expert with an HVLP system, and even farther away from being a skilled painter - so if anyone else can provide information in this area then give your hard working newsletter editors something to put in the newsletter.

Self-contained HVLP systems that have a turbine supplying air through a large diameter hose operate the gun at somewhere between 5 and 10 PSI which helps reduce overspray and heavy mist cloud in the spray booth. Other than that, they spray in a way that is very similar to a standard gun, except that they usually have a pressurized cup instead of a siphon cup (remember that you need to remove the air hose before you open the gun to check paint level).

General tips:

- Do use all of the hose provided (even if longer than needed, it helps cool the air before it gets to the gun. It is advantageous to have at least 25 ft).
- Always keep the turbine unit totally removed from the spray area so that it draws in only clean fresh air to prevent damage.
- Be careful with the fat stiff hose, it is easy to stick it in fresh paint because it is harder to keep it were you would like it.
- In warmer weather route the hose through a 5 gal bucket of cold water (change often) right after it leaves the turbine unit to help cool the air down before it gets to the gun.

-- Because the air is warmed expect to use more reducer than would be typical for a regular gun. Particularly in hot weather. I have used the maximum recommended when spraying PPG Durethane and Imron. Requirements of other paints would probably be similar.

- If the paint system has reducers for different temp, ranges use the next higher range than you would for the temp, that you will be spraying in.

- If the paint system has a specified retarder that may be used, plan to use some. Do some testing beforehand.

- The spray guns usually have a valve at the hose connection for air control. I always leave this valve full open except to turn off the air when removing the hose. Turning down the airflow does reduce the over spray, but it also reduces the atomization quality which is already not as good as a high pressure gun. (which makes it more prone to orange peel).

- Practice mixing paint and spraying with the gun so that you can spray as heavy (wet) of coats as possible. This will help offset the lower quality atomization by getting good flow out. (for that real wet glossy look with no orange peel you have to be right at the edge of getting runs and sags; but hopefully not over the edge).

- Remember that because of the gun's design, any adjustment you make will effect all other adjustments. Change the fan size, it will change the paint volume, etc.

- Clean all the equipment very well when you are done. The next person to use it shouldn't be able to tell what color paint you sprayed, except that he's been admiring that beautiful paint finish before starting his so he will already know what the color was.

Bottom line - Practice, practice, practice. Especially if you haven't done much painting before (spend a few extra dollars to have enough paint to practice painting something else using the same paint to get the experience. I'm sure you could find something that could use a long lasting airplane shine) If you have painted before, still take some time to get accustomed to this new equipment. When I painted my airplane it was the first. It was challenging and at times also frustrating, but in the end very satisfying when you can tell people that admire your masterpiece "Yup, I painted it myself"

Hope these tips are of some help. Go ahead; give it a try!

CREW CAR BRIGHT SPOT!

by John Purnerjpumer@tpwi.com

How refreshing to have received the following Crew Car report: " Gainesville, TX (Gainesville Muni - GLE) 11/97 Airport Crew Car

The Gainesville Municipal Airport has three crew cars (2 cars and a pickup) for use. The east door of the airport terminal is open 24-hours a day. The keys are located on the counter as you walk through the door. All you need to do is fill out the information sheet and take a crew car. You can keep it over night or all weekend, if you need. All that we ask is you replace the fuel you use. The air conditioner and heater work in all the vehicles.

Please print this out and give it to every FBO you encounter. If they all followed this airport's lead the dilemma of the last four miles would disappear.

Thanks to each of you, our newest Website, Crew Car, has taken off rather quickly. Many new locations have been reported on in the last 10 days! I believe the dilemma of the last four miles, or "How do I get to town from the airport?" continues to be one of "the largest problems besetting General Aviation.

Working together we can solve it, by supporting those airports and FBOs that support us! When ground transportation can't be found on the other end, the plane stays in the hangar!

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EAA OSHKOSH '97 FAST FACTS

provided by the EAA

- Total Est Attendance: 840,000 (2nd highest)
- Total Airplanes: Total 11,500
- Showplanes: 2,648
- Volunteers: 4,500 (over 200,000 hours)
- Campers: 40,000 (at Camp Scholler)
- International visitors: 2,525 registered (76 nations)
- Media journalists: 1,100
- Commercial Exhibitors: 725+
- Economic Impact: \$83 million throughout WI
- Oshkosh 98: July 29 - August 4

BUILDERS TIP'S

from the internet (Western Canada Rvator)

by Errol Jansen

One technique when using steel pop rivets in aluminum is to dip the pop rivet in a rather thick solution of zinc chromate primer just before installation. This is to reduce the amount of electrolysis between the aluminum and the steel rivet. The operation is somewhat messy but nobody ever promised that airplane building was a clean business.

by Boris (smbbr@digital.net)

Mix a can of fresh cayenne pepper with a minimum of light food oil in a blender. Let it set a day of two. Paint it on cross beams over the plane, etc. This was recommended to me by a farm supply friend and it really works. It deters birds and also mice size/type critters. Great for those of us who are typically somewhat environmentally challenged.

Oil Cooler Front Mount vs Back Baffle Mount by

Bob Skinner

I felt the forward mount was easier to fabricate in a airworthy manner than the left rear baffle mount. Other pluses for the forward location are: moving the weight of the cooler (and the oil it holds) farther forward which is an advantage for W&B on RV-6s, it's easier to fabricate an adjustable oil cooler door to regulate oil temps and the forward mount makes it easier to work on the rear of the engine (left mag, oil filter, etc). Anyway, I've gotten 350 hrs on my 6 and it has a front mounted oil cooler. No problems or cracks yet.

Judging from the un-cowled RVs that I've seen, the left rear mount location is a little easier if you're using flat (conical) engine mounts. If you're using the dynafocal mounts, there is an interference with a cross tube of the engine mount. This is why the coolers are mounted at an angle or located farther to the left on the rear baffle, which requires additional support structure.

By the way, no matter what location you choose, if you're using aircraft oil coolers, don't forget to use the spacers between the flanges of the cooler and long bolts that go through both flanges. I've seen several cooler installations where just one flange is attached. With the weight of the cooler and the vibration of the engine, there is a good chance that the attach flange on th< cooler will fail at some point.

HANGAR HUMOR

.passed from friend to friend... original source unknown

Infamous Quotes

"640K ought to be enough for anybody."

-Bill Gates, 1981

"Computers in the future may weigh no more than 1.5 tons."

-Popular Mechanics, forecasting the relentless march of science, 1949

"I think there is a world market for maybe five computers."

-Thomas Watson, chairman of IBM, 1943

"But what... is it good for?"

-Engineer at the Advanced Computing Systems Division of IBM, 1968, commenting on the microchip.

"There is no reason anyone would want a computer in their home."

-Ken Olson, president, chairman and founder of Digital Equipment Corp., 1977

"This 'telephone' has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us."

-Western Union internal memo, 1876.

"The wireless music box has no imaginable commercial value. Who would pay for a message sent to nobody in particular?"

-David Sarnoffs associates in response to his urgings for investment in the radio in the 1920s.

WANTED *Ads are FREE*

Looking for an engine for an RV-8 that's in progress. Any ideas? Bryan Stauter oasis@oio.net

Set of RV-3 plans. David Ohnsager expat@premier1 .net

Glastar Builder looking to purchase Sheet Metal Tools. Gary Clay 503-653-6897. 10/97

Desperately seeking workspace for RV project. Please call Don Wert at 503-295-6455. 8/97

"A cookie store is a bad idea. Besides, the market research reports say America likes crispy cookies, not soft and chewy cookies like you make."

-Response to Debbi Fields' idea of starting Mrs. Fields' Cookies.

"We don't like their sound, and guitar music is on the way out."

-Decca Recording Co. rejecting the Beatles, 1962.

"Airplanes are interesting toys but of no military value."

-Marechal Ferdinand Foch, Professor of Strategy, Ecole Superieure deGuerre.

"Everything that can be invented has been invented."

-Charles H. Duell, Commissioner, U.S. Office of Patents, 1899.

"Outside of the killings, Washington has one of the lowest crime rates in the country."

- Mayor Marion Barry, Washington, DC

Question: If you could live forever, would you and why?

Answer: I would not live forever, because we should not live forever, because if we were supposed to live forever, then we would live forever, but we cannot live forever, which is why I would not live forever.

- Miss Alabama in the 1994 Miss Universe contest

"I haven't committed a crime. What I did was fail to comply with the law".

-David Dinkins, New York City Mayor, answering accusations that he failed to pay his taxes.

THE TOOL EXCHANGE

The club Toolmeister is Brent Ohlgren, 288-8197. Let him know if you have jigs, tools, shop space, etc. to loan, exchange, or otherwise provide ~ at NO COST - or if you are looking for something specific to borrow. And whether your item is listed here or not, go ahead and bring it to the meeting.

Home Wing Tools available: HVLP Paint Sprayer, Hole template for instrument panel, Wire crimping tool and die, Brake lining rivet set tool, and Tune-up and Annual Equipment (Compression check, Mag timing light, Timing dial, Mag adjustment tool, Plug gapper, high voltage cable tester, and Plug vibrator cleaner). Brent Ohlgren 288-8197.

Packaging for a Lycoming Engine - cast styrofoam case and shipping stand. Ken Scott 503-648-1594.

Cutting wheel mandrel, custom made by Stan VanGrunsvan to use for cutting your canopy. Knob on the outside makes it much easier to hold steady and not screw up that expensive piece of Plexiglas. WHO HAS THIS? Call Brent Ohlgren 288-8197.

Joggle tool. Rion Bourgeois 646-8763.

PropTach (optical electronic tach, use to calibrate your tachometer). Butch Walters 360-636-2483.

Engine Stand. Don Wentz 503-696-7185.

Engine Hoist. Norm Rainey 360-256-6192.

Precision chemical scale, for measuring pro-seal. Brent Anderson 646-6380. Surveyor's transit

level - handy way to level wing and fuselage jigs. Bill Kenny 590-8011.

Back Riveting Contraption - large, counterweighted bucking bar and suspension system, and offset back rivet sets. (See "Back Riveting Wing Skins, December 1994 issue). Bob Neuner 771-6361.

Lead crucible with electric heating element for melting lead for the elevator counterweights. Doug Stenger 324-6993. Table saw

taper jig, for tapering wing spar flange strips. Carl Weston 649-8830.

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FOR SALE/ RENT Ads are FREE.

FREE... *Fuselage jig...* made by Stan VanGrunsvan. Kathy Hall 503-543-5902 12/97

FREE...wing jig and control surface making device. Jan Martin 360-834-5008 12/97

Issue 97.12

December 1997

O-320E3D, 1000SMOH, Garb and filtered airbox, fuel pump, Slick mags and harness, 55amp alternator, baffles and exhaust, heat muff, starter, 4" prop ext, 12" diameter Harold spinner, Pacesetter 200 prop, \$8750. John Morgan 503-628-2076 12/97

Engine mount (dynafocal I), short gear legs, single piece wheel pants, fixed pitch cowling, all are for RV-4, best offer. John Morgan 503-628-2076

H10-30 David Clark headset w/microphone. Used 5 times. \$100. Gary Standley 503-591-9040 12/97

Three wheel, 12" bandsaw plus several blades (the Harbor Freight model).. Barely used. \$40 obo. John Kimmel 503-794-1827. 12/97

For Sale: Two new military surplus stick grips. Real military grips with all the cool buttons, triggers, etc. No coolie hat, but could be added. \$50 ea. Randall Henderson (503) 297-5045 11/97

IO-360 200hp OSMOH out of Mooney. Includes new pistons, rings, valves, oil pump gears and housing, bearings, fuel pump and f.i. \$17,900 or make offer. This engine is overhauled by Premier in Troutdale. Jim (503-637-6621 or jheadric@aol.com) 11/97

Van's Air Force Apparel, Home Wing member discount. Limited edition VAF hats, gray crown with black bill. Four color 100% embroidered jacket patches. Van's Air Force jackets, MA-1 style black w/red liner, VAF patches on shoulder and breast, pencil pocket, optional name patch. Randall Henderson (503) 297-5045, or catch me at a meeting.

Duckworks Landing Lights. Retro-fittable, light, easy installation. Kits start at \$69 (discount for Rid RVators). Don Wentz 503-696-7185.

"Home Wing" Newsletter Subscription/Renewal

Please fill out and mail to **Jerald & Kathy Hall, 32034 J.P. West Rd., Scappoose, OR 97056-2600**, along with \$10 for renewals or new subscriptions. Please make checks payable to Kathv Hall. If you are renewing, you only need to give your name, date, payment method, and any other information that has changed. Use this form for address changes too.

Name	Spouse's Name
Address	Home Phone
City, State, Zip	Work Phone

Pmt (\$10/yr) Check_ Cash_ Info change only _ E-mail Address.

Project (RV-3, 4, 6, 6A, 8)_____ Comments?

Progress:

Tail	In Progress _	Finished _
Wings	In Progress_	Finished _
Fuselage	In Progress_	Finished _
Finish	In Progress _	Finished (i.e. flying) _